

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
**(Under 37 CFR 1.97(b) or 1.97(c))**

Docket No.  
**RLL-267US**

In Re Application Of: **MEHTA et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/525,439		unknown	26815	unknown	3824

Title: **FLUORO AND SULPHONYLAMINO CONTAINING 3,6-DISUBSTITUTED AZABICYCLO [3.1.0.] HEXANE DERIVATIVES AS MUSCARINIC RECEPTOR ANTAGONISTS**

Address to:  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:
- ☐ the statement specified in 37 CFR 1.97(e);
- OR**
- ☐ the fee set forth in 37 CFR 1.17(p).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
RLL-267US

In Re Application of: **MEHTA et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/525,439		unknonwn	26815	unknown	3824

Title: **FLUORO AND SULPHONYLAMINO CONTAINING 3,6-DISUBSTITUTED AZABICYCLO [3.1.0.] HEXANE DERIVATIVES AS MUSCARINIC RECEPTOR ANTAGONISTS**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached. **50.0912**
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. \_\_\_\_\_ as described below.
- ☐ Charge the amount of \_\_\_\_\_
- ☐ Credit any overpayment.
- ☒ Charge any additional fee required.
- ☐ Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

**Certificate of Transmission by Facsimile\***

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (Fa

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed or Printed Name of Person Signing Certificate

**Certificate of Mailing by <sup>EXPRESS</sup> First Class Mail**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as ~~first class~~ <sup>EXPRESS</sup> mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

**1 August 2005**

\_\_\_\_\_  
(Date)

*Michelle Morgan*


\_\_\_\_\_  
Signature of Person Mailing Correspondence

Michelle Morgan

\_\_\_\_\_  
Typed or Printed Name of Person Mailing Certificate

**\*This certificate may only be used if paying by deposit account.**

Dated: **1 August 2005**

  
James DeYonker  
Reg. No. 52,817

**CUSTOMER NO. 26,815**

CC:

<b>INFORMATION DISCLOSURE CITATION</b>	Docket No.: RLL-267US	Serial No.: 10/525,439
	Applicants: MEHTA <i>et al.</i>	
	Filed: 2/23/2005	Group:

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	3,176,019	3/30/1965	Campbell <i>et al.</i>	260	293.4	
	A2	5,281,601	1/25/1994	Cross <i>et al.</i>	514	320	
	A3	5,397,800	3/14/1995	Alker <i>et al.</i>	514	413	
	A4	5,735,690	4/7/1998	Malentacca	433	102	
	A5	5,948,792	9/7/1999	Tsuchiya <i>et al.</i>	514	317	
	A6	6,130,232	10/10/2000	Mase <i>et al.</i>	514	318	
	A7	6,174,900	1/16/2001	Okada <i>et al.</i>	514	317	

FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES   NO
	B1	EP 0 325 571	7/26/1989	EPO	C07C	215/54	
	B2	EP 0 388 054	9/19/1990	EPO	C07D	207/08	
	B3	EP 0 413 455	2/20/1991	EPO	C07D	401/04	
	B4	EP 0 801 067	10/15/1997	EPO	C07D	453/02	
	B5	GB 940,540	10/30/1963	UK	C07C		
	B6	JP 135989/1994	5/17/1995	Japan	C07D	333/16	
	B7	JP 92921/1994	4/5/1994	Japan	C07C	237/20	
	B8	WO 91/09013	6/27/1991	PCT	C07D	207/08	
	B9	WO 93/16018	8/19/1993	PCT	C05F	17/02	
	B10	WO 93/16048	8/19/1993	PCT	C07D	211/26	
	B11	WO 95/15312	6/8/1995	PCT	C07D	209/52	
	B12	WO 95/15327	6/8/1995	PCT	C07D	487/04	
	B13	WO 96/33973	10/31/1996	PCT	C07D	211/46	
	B14	WO 97/36906	10/9/1997	PCT	C07D	487/08	

EXAMINER	DATE CONSIDERED
----------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b>	Docket No.: RLL-267US	Serial No.: 10/525,439
	Applicants: MEHTA <i>et al.</i>	
	Filed: 2/23/2005	Group:

	B15	WO 97/45414	12/4/1997	PCT	C07D	211/58	
	B16	WO 98/05641	2/12/1998	PCT	C07D	211/46	
	B17	WO 98/29402	7/9/1998	PCT	C07D	311/20	

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	C1	Kubo et al., "Cloning, sequencing and expression of complementary DNA encoding the muscarinic acetylcholine receptor", <i>Nature</i> , <u>323</u> (2):411-416 (1986)
	C2	Bonner et al., "Identification of a Family of Muscarinic Acetylcholine Receptor Genes", <i>Science</i> , <u>237</u> :527-531 (1987)
	C3	Eglen et al., "Muscarinic receptor ligands and their therapeutic potential", <i>Current Opinion in Chemical Biology</i> , <u>3</u> :426-432 (1999)
	C4	Eglen et al., "Therapeutic opportunities from muscarinic receptor research", <i>Trends in Pharmacological Sciences</i> , <u>22</u> (8):409-414 (2001)
	C5	Felder et al., "Therapeutic Opportunities for Muscarinic Receptors in the Central Nervous System", <i>Journal of Medicinal Chemistry</i> , <u>43</u> (23):4333-4353 (2000)
	C6	Broadley and Kelly, "Muscarinic Receptor Agonists and Antagonists", <i>Molecules</i> , <u>6</u> :142-193 (2001)
	C7	Birdsall et al., "Muscarinic receptors: it's a knockout", <i>Trends in Pharmacological Sciences</i> , <u>22</u> (5):215-219 (2001)
	C8	de Groat and Yoshimura, "Pharmacology of the Lower Urinary Tract", <i>Annual Review of Pharmacology and Toxicology</i> , <u>41</u> :691-721 (2001)
	C9	Steers, "The future direction of neuro-urology drug research", <i>Current Opinion in CPNS Investigational Drugs</i> , <u>2</u> (3):268-282
	C10	Chapple, "Muscarinic receptor antagonists in the treatment of overactive bladder", <i>Urology</i> , <u>55</u> (Suppl. 5A):33-46 (2000)
	C11	Steers, Barrot, Wein, "Voiding dysfunction: diagnosis classification and management", In: <i>Adult and Pediatric Urology</i> , ed. Gillenwater, Grayhack, Howards, Duckett. Mosby, St. Louis, MO; 1220-1325, 3rd edition (1996)
	C12	Sagara et al, "Cyclohexylmethylpiperidinyltriphenylpropioamide: A Selective Muscarinic M <sub>3</sub> Antagonist Discriminating against the Other Receptor Subtypes", <i>Journal of Medicinal Chemistry</i> , <u>45</u> (4):984-987 (2002)
	C13	Mase et al., "Synthesis of a Muscarinic Receptor Antagonist via a Diastereoselective Michael Reaction, Selective Deoxyfluorination and Aromatic Metal-Halogen Exchange Reaction", <i>Journal of Organic Chemistry</i> , <u>66</u> (20):6775-6786 (2001)
	C14	Mitsuya et al., "Discovery of a Muscarinic M <sub>3</sub> Receptor Antagonist with High Selectivity for M <sub>3</sub> Over M <sub>2</sub> Receptors Among 2-[(1S,3S)-3-Sulfonylaminocyclopentyl]phenylacetamide Derivatives" <i>Bioorganic &amp; Medicinal Chemistry</i> , <u>8</u> :825-832 (2000)

EXAMINER	DATE CONSIDERED
----------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b>	Docket No.: RLL-267US	Serial No.: 10/525,439
	Applicants: MEHTA <i>et al.</i>	
	Filed: 2/23/2005	Group:

	C15	Grover et al., "Chiral Mandelic Acid Template Provides a Highly Practical Solution for (S)-Oxybutynin Synthesis", <i>Journal of Organic Chemistry</i> , <u>65</u> :6283-6287 (2000)
	C16	Moriya et al., "Affinity Profiles of Various Muscarinic Antagonists for Cloned Human Muscarinic Acetylcholine Receptor (mAChR) Subtypes and mAChRs in Rat Heart and Submandibular Gland", <i>Life Sciences</i> , <u>64</u> (25):2351-2358 (1999)
	C17	Cheng and Prusoff, "Relationship between the inhibition constant ( <i>K</i> <sub>1</sub> ) and the concentration of inhibitor which causes 50 per cent inhibition ( <i>I</i> <sub>50</sub> ) of an enzymatic reaction", <i>Biochemical Pharmacology</i> , <u>22</u> :3099-3108 (1973)
	C18	Jeppesen et al., "1-(1,2,5-Thiadiazol-4-yl)-4-azatricyclo[2.2.1.0 <sup>2,6</sup> ]heptanes as New Potent Muscarinic M <sub>1</sub> Agonists: Structure-Activity Relationship for 3-Aryl-2-propyn-1-yloxy and 3-Aryl-2-propyn-1-ylthio Derivatives", <i>Journal of Medicinal Chemistry</i> , <u>42</u> (11):1999-2006 (1999)

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	